

**READ THIS MANUAL CAREFULLY!**  
It contains important safety information

## **OWNER'S MANUAL**

**ATV110-M** Anyone under 16 should  
not be allowed to operate this vehicle.

Our company has passed the certification of ISO9001.



# **ATV110-M**



# FOREWORD

Thanks for purchasing ATV110-M. This manual includes important safety information. It provides information about special techniques and skills necessary to ride this vehicle. It also includes the details to operate and necessary maintenance procedure to perform safely.

## **IMPORTANT SAFETY MESSAGE:**

- PAY ATTENTION TO THE CAUTION AND WARNING LABELS ON THIS ATV.
- READ THIS MANUAL BEFORE OPERATING THIS ATV. MAKE SURE YOU UNDERSTAND ALL INSTRUCTION. ALSO KEEP ALL INFORMATION IN MIND WHILE OPERATING THIS ATV.
- ANYONE UNDER AGE 16 SHOULD NEVER BE ALLOWED TO OPERATE ATV110-M.
- KEEP THIS MANUAL IN THE WATERPROOF PLACTIC BAG AND STORED IN THE COM-  
PARTMENT PROVIDED BY YOU ATV.
- FAILURE TO FOLLOW THE WARNINGS CONTAINED IN THIS MANUAL CAN RESULT IN  
SERIOUS INJURY OR DEATH.
- NEVER CARRY A PASSENGER ON THIS ATV.



## **IMPORTANT NOTICE TO PARENTS AND ADULTS**

- THIS ATV IS NOT A TOY.
- YOU SHOULD UNDERSTAND THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL BEFORE YOU LET YOUR CHILD RIDE THIS ATV. THEN BE SURE YOUR CHILD UNDERSTANDS AND WILL FOLLOW THEM.
- THIS ATV SHOULD ONLY BE OPERATED UNDER THE DIRECT SUPERVISION OF AN ADULT.
- NEVER EXCEED YOUR RIDING CAPABILITIES.
- THIS ATV CAN BE HAZARDOUS TO OPERATE, AVOID EXCESSIVE SPEED, PAVED SURFACES, SHARP TURNS, AND UNEVEN TERRAIN.
- ADULTS SHOULD ADJUST THE THROTTLE FOR SLOWER SPEEDS.
- NEVER RIDE THIS ATV DURING LOW LIGHT CONDITIONS.
- CHILDREN DIFFER IN SKILLS. SOME CHILDREN MAY NOT BE ABLE TO OPERATE AN ATV SAFELY. PARENTS SHOULD PERMIT CONTINUED USE ONLY IF THEY DETERMINE THAT THE CHILD HAS THE ABILITY TO OPERATE THE ATV SAFELY.
- IF YOUR CHILD IS INEXPERIENCED IN RIDING ATV, HE OR SHE SHOULD TAKE A TRAINING COURSE BEFORE OPERATING THIS ATV.



**Whenever you see the symbols shown below, heed their instructions. Always follow safe operating and maintenance practices.**

## **WARNING**

### **HAZARD**

Failure to heed WARNINGS.

### **WHAT CAN HAPPEN**

WARNINGS identify special instructions or procedures which, if not correctly followed, could result in serious injury or death.

### **HOW TO AVOID THE HAZARD**

Read all WARNINGS in this manual carefully and for your safety be sure to follow their instruction.

## **CAUTION**

This caution symbol identifies special instruction Or procedures which, if not strictly observed, could Result in damage to or destruction of equipment.

## **NOTE**

This note symbol indicates points of particular interest for more efficient and convenient operation.

**FAILURE TO FOLLOW THE WARNINGS CONTAINED IN THIS MANUAL CAN RESULT IN SERIOUS INJURY OR DEATH.**



## **IMPORTANT NOTICE**

Off-road vehicle riding is a wonderful sport, and we hope you will enjoy it to the fullest.

This vehicle is designed and manufactured for off-road use only. It is illegal and unsafe to operate this vehicle on any public road, street and highway.

This vehicle complies with all applicable off-road noise and spark arrester laws and regulations in effect at the time of manufacture. Please check your local riding laws and regulations before operating this vehicle.

Read this manual carefully and completely before starting your new ATV

It contains important safety information. Never operate this ATV without proper instruction. Beginner should take a training course before operating this vehicle.

Never allow a child under the age 16 to operate this ATV. Use of this ATV by children under 16 years of age can lead to severe injury or death of the child. Even youths starting at age 16 may not have the skills, abilities, or judgment needed to operate this ATV safely. Therefore youths starting at age 16 should have adult supervision even after they attend a training course. To protect your safety, make sure you use your vehicle legally, show concern for the environment, and respect the rights of other people.



## **WARNING**

**Indicate a potential hazard that could result in personal injury or death.**

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## SAFETY INFORMATION

**AN ATV IS NOT A TOY AND CAN BE HAZARDOUS TO OPERATE.** An ATV handles differently from other vehicles including motorcycle and cars. A collision or rollover can occur quickly, even during routine maneuvers such as turning and driving on hills or over obstacles, if you fail to take proper precautions.

**SEVERE INJURY OR DEATH can result if you do not follow these instructions:**

- Read this manual and all labels carefully and follow the operating procedures described.
- Never operate an ATV without proper instruction. Take a training course. Beginners should receive training from a certified instructor.
- Always follow the age recommendation:
  - A child under 6 years old should never operate an ATV with engine size greater than 50 c.c.
  - A child under 12 years old should never operate an ATV with engine size greater than 70 c.c.
  - A child under 16 years old should never operate an ATV with engine size greater than 90 c.c.



- Never allow a child under age 16 to operate ATV without adult supervision, and never allow continued use of an ATV by a child if he or she does not have the abilities to operate it safely.
- Never carry a passenger on an ATV.
- Never operate an ATV on any public road, street or highway, even a dirt or gravel one.
- Never consume alcohol or drugs before or while operating this ATV.
- Never operate an ATV without wearing an approved motorcycle helmet that fits properly. You should also wear eye protection (face shield or goggles), gloves, boots, long-sleeved shirt or jacket, and long pants.
- Always avoid operating an ATV on any paved surfaces, including driveways, sidewalks, streets and parking lots.
- Always go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating the ATV.
- Always follow proper procedures for turning as described in this manual. Practice turning at low speeds before attempting to turn at faster speeds. Do not turn at excessive speed.
- Never operate on excessively rough, slippery or loose terrain until you have learned and practiced the skill necessary to control the ATV on such terrain. Always be especially cautious on these kinds of terrain.
- Always keep both hands on the handlebars and both feet on the footrests of the ATV during



operation.

- Always inspect your ATV each time you use it to make sure it is in safe operating condition. Always follow the inspection and maintenance procedures and schedules described in this manual.
- Never attempt wheelies, jumps, or other stunts.
- Never operate at speeds too fast for your skills or the conditions. Always go at a speed that is proper for the terrain, visibility and operating conditions, and your experience.
- Never exceed the stated load capacity for an ATV. Cargo should be properly distributed and securely attached. Reduce speed and follow instructions in this manual for carrying cargo or pulling a trailer. Allow greater distance for braking.
- Never modify an ATV through improper installation or use of accessories.
- Never operate the ATV on hills too steep for the ATV or for your abilities. Practice on smaller hills before attempting larger hills.
- Always follow proper procedures for climbing hills as described in this manual. Check the terrain carefully before you start up any hill. Never climb hills with excessively slippery or loose surfaces. Shift your weight forward. Never open the throttle suddenly or make sudden gear changes. Never go over the top of a hill at high speed.
- Always use the size and type tires specified in this manual. Always maintain proper tire pressure as described in this manual.



- Never attempt to operate over large obstacles, such as large rocks or fallen trees. Always follow proper procedures when operating over obstacles as described in this manual.
- Always use proper procedures if you stall or roll backwards when climbing a hill. To avoid stalling, use proper gear and maintain a steady speed when climbing a hill. If you stall or roll backwards, follow the special procedure for braking described in this manual. Dismount on the uphill side or to a side if pointed straight uphill. Turn the ATV around and remount, follow the procedure described in this manual.
- Always be careful when skidding or sliding. Learn to safety control skidding or sliding by practicing at low speeds and on level, smooth terrain. On extremely slippery surface, such as ice, go slowly and be very cautious in order to reduce the chance of skidding or sliding out of control.
- Never operate an ATV in fast flowing water or in water deeper than the recommended in this manual. Remember that wet brakes may have reduced stopping ability. Test your brakes after leaving water. If necessary, apply them several times to let friction dry out the linings.
- Always follow proper procedures for going down hills and for braking on hills as described in this manual. Check the terrain carefully before you start down any hill. Shift your weight backward. Never go down a hill at high speed. Avoid going down a hill at an angle that will cause the ATV to lean sharply to one side. Go straight down the hill where possible.



- Always follow proper procedures for crossing the side of a hill as described in this manual. Avoid hills with excessively slippery or loose surface. Shift your weight to the uphill side of the ATV. Never attempt to turn the ATV around on any hill until you have mastered the turning technique described in this manual on level ground. Avoid crossing the side of a steep hill if possible.
- Always check for obstacles before operating in a new area.



## **WARNING**

### **POTENTIAL HAZARD**

Improper handling of gasoline.

### **WHAT CAN HAPPEN**

Gasoline can catch and you could be burned.

### **HOW TO AVOID THE HAZARD**

Always shut down the engine while refueling. Do not refuel immediately after the engine has been running and is still very hot. Do not spill gasoline on the exhaust muffler/pipe or engine when refueling. Never refuel while smoking, or while in the vicinity of sparks, open flames, or other sources of ignition such as the pilot lights of clothes dryers or water heaters

When transporting the ATV in another vehicle, make sure it is placed upright and its fuel cock is in the “OFF” position. Otherwise, gasoline may leak out from the fuel tank or carburetor.

### **WHAT CAN HAPPEN**

Gasoline is poisonous and can cause injuries.

### **HOW TO AVOID HAZARD**

If you swallow some gasoline or breathe a lot of gasoline vapor, or get some gasoline into your eyes, see your doctor right away. If gasoline spills on your skin, wash with water and soap immediately. If gasoline spills on your clothes, change your clothes immediately.



## **WARNING**

### **POTENTIAL HAZARD**

Starting or running the engine in a closed area.

### **WHAT CAN HAPPEN**

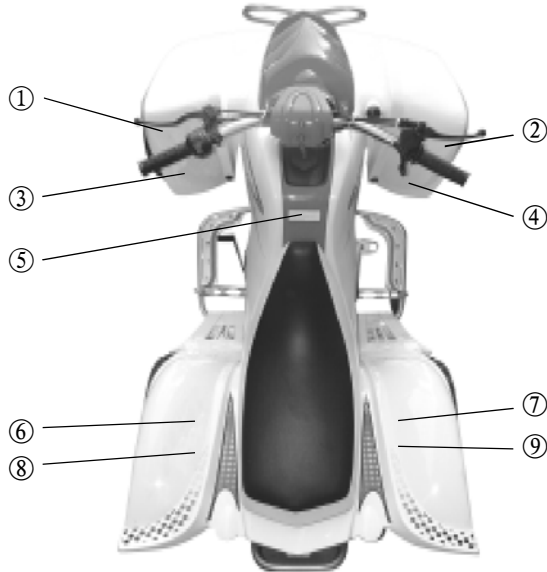
Exhaust smokes are poisonous and may cause people unconsciousness and death within a short time.

### **HOW TO AVOID THE HAZARD**

Always start and operate your ATV in an area with adequate ventilation



## LOCATION OF THE WARNING AND SPECIFICATION LABELS



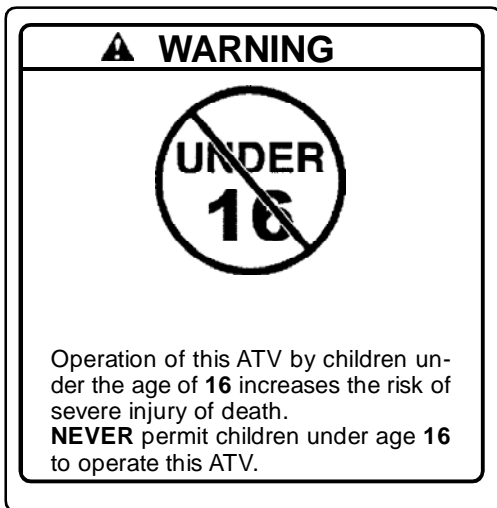
Read and understand all of the labels on this ATV. They contain important information for safe and proper operation of your ATV.

Never remove any labels from your vehicle. If any label becomes difficult to read or comes off, a replacement label is available from your dealer.

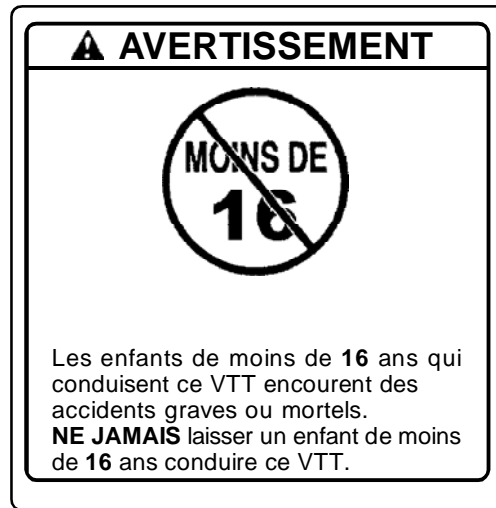
French warning label No. 2, 4, 7 & 9 are not equipped if not required.



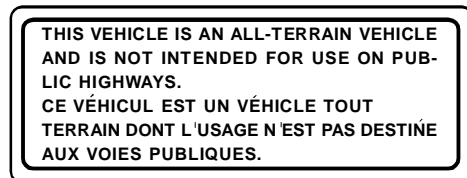
①



②



⑤





③

**⚠ WARNING**

Improper ATV use can result in **SEVERE INJURY** or **DEATH**.



**ALWAYS USE  
AN APPROVED  
HELMET AND  
PROTECTIVE  
GEAR**



**NEVER USE  
ON PUBLIC  
ROADS**



**NEVER CARRY  
PASSENGERS**



**NEVER USE  
WITH DRUGS  
OR ALCOHOL**

**NEVER operate:**

- without proper training or instruction.
- at speeds too fast for your skills or the conditions.
- on public roads-a collision can occur with another vehicle.
- with a passenger-passengers affect balance and steering and increase risk of losing control.

**ALWAYS:**

- use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns.
- avoid paved surfaces-pavement may seriously affect handling and control.

**LOCATE AND READ OWNER'S MANUAL.  
FOLLOW ALL INSTRUCTIONS AND WARNINGS.**

④

**⚠ AVERTISSEMENT**

L'utilisation incorrecte du VTT peut résulter en **BLESSURES GRAVES** ou **MÊME LA MORT**.



**TOUJOURS PORTER  
UN CASQUE ET  
DES VÊTEMENTS  
DE SÉCURITÉ  
APPROUVÉS**



**NE JAMAIS  
UTILISER SUR  
DES ROUTES  
PUBLIQUES**



**NE JAMAIS  
ACCEPTER DE  
PASSAGER**



**NE JAMAIS  
CONDUIRE SOUS  
L'INFLUENCE DE  
STUPÉFIANTS OU  
D'ALCOOL**

**NE JAMAIS conduire:**

- sans avoir reçu une formation ou des directives adéquates au préalable.
- à des vitesses excédant vos compétences ou les conditions de conduite.
- sur les routes publiques-au risque de provoquer une collision avec un autre véhicule.
- avec un passager-les passagers affectent l'équilibre et la manoeuvrabilité et augmentent le risque de perte de contrôle.

**TOUJOURS:**

- utiliser des techniques de conduite acceptées pour éviter le renversement du véhicule sur collines, terrains accidentés et dans les virages.
- éviter les chaussées pavées-au risque d'affecter gravement la manoeuvrabilité et le contrôle.

**REPÉRER ET LIRE LE MANUEL DU PROPRIÉTAIRE.  
SUIVRE TOUS LES AVERTISSEMENTS ET DIRECTIVES.**



⑥

## ⚠ WARNING

**IMPROPER TIRE PRESSURE OR OVERLOADING CAN CAUSE LOSS OF CONTROL.**

**LOSS OF CONTROL CAN RESULT IN SEVERE INJURY OR DEATH.**

**OPERATING TIRE PRESSURE:** Set with tires cold

- Recommended : FRONT : 20kPa, {0.20 kgf/cm<sup>3</sup>}, 2.9psi  
REAR : 20kPa, {0.20 kgf/cm<sup>3</sup>}, 2.9psi
- Minimum : FRONT: 17kPa, {0.17 kgf/cm<sup>3</sup>}, 2.5psi  
REAR : 17kPa, {0.17 kgf/cm<sup>3</sup>}, 2.5psi

- Never set tire pressure below minimum.  
It could cause the tire to dislodge from the rim.

### LOADING

- Maximum Vehicle load: 95kg, (209lbs).  
Includes weight of operator, cargo and accessories.

⑦

## ⚠ AVERTISSEMENT

**UNE PRESSION DE GONFLAGE DE PNEU INCORRECTE OU UNE SURCHARGE PEUVENT ENTRAÎNER LA PERTE DE CONTRÔLE. UNE PERTE DE CONTRÔLE PEUT ENTRAÎNER DE SÉRIEUSES BLESSURES OU LA MORT.**

**PRESSION DE SERVICE DES PNEUS:** Régler avec des pneus froids

- recommandée: AVANT : 20kPa, {0.20 kgf/cm<sup>3</sup>}, 2.9psi  
ARRIÈRE : 20kPa, {0.20 kgf/cm<sup>3</sup>}, 2.9psi
- Minimum : AVANT : 17kPa, {0.17 kgf/cm<sup>3</sup>}, 2.5psi  
ARRIÈRE : 17kPa, {0.17 kgf/cm<sup>3</sup>}, 2.5psi

- Ne jamais régler la pression de gonflage de pneu en dessous de la valeur minimum. Cela pourrait faire se déloger le pneu de la jante.

### CHARGEMENT

- Charge Maximum du véhicule: 95kg, (209lbs)  
Comprend poids de l'opérateur, chargement et accessoires.

⑧

## ⚠ WARNING



**NEVER ride as a passenger.**

**Passengers can cause a loss of control, resulting in SEVERE INJURY or DEATH.**

⑨

## ⚠ AVERTISSEMENT



**NE JAMAIS prendre de passager.**

**Les passagers risquent de faire perdre le contrôle et d'entraîner des BLESSURES GRAVES ou même la MORT.**



# VEHICLE IDENTIFICATION

## Identification number records

Record the vehicle identification number and engine number in the follow spaces provided for assistance when ordering spare parts from your dealer or for reference in case the ATV is stolen.

1. Vehicle Identification Number:

2. Engine Number

## Vehicle identification number

The vehicle identification number is stamped into the frame. This vehicle identification number is used to identify your ATV.



## CONTROL FUNCTIONS

### **WARNING**

**Indicates a potential hazard that could result in serious injury or death.**

#### **Main switch**

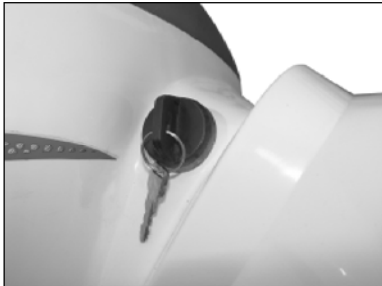
Functions of the respective switch positions are as follows:

**ON:**

The engine can be started only at this position

**OFF:**

All electrical circuits are switched off. The key can be removed in this position.



## Indicator lights

### **Neutral indicator light “N”**

This indicator light comes on when the transmission is in neutral.





### **Handlebar Switches**

Placed in left handlebar:

1. Headlight switch (Blue button)
2. Engine stop switch (Red button)
3. Start switch (Yellow button)

### **Headlight switch:**

**HL:** Headlight on

**●:** Headlight switch:

To gain longer life of the battery, always start the engine with the headlight switch at off position

### **Engine stop switch “ENG. STOP”**

The engine stop switch controls ignition and can be used at all times to stop the engine, especially in an emergency. The engine will not start when this switch is in “OFF” position.

### **Start switch “Start”**

Push this switch to let the starter motor crank the engine.

### **CAUTION:**

**To start the engine, also see page 32 for more details.**

### **NOTE:**

If the starter switch is pushed with the main switch “ON” and the engine stop switch “OFF”, the starter motor will be activated but the engine will not start. To start the engine, make sure the engine stop switch at “RUN” position.



## Throttle lever

**Accelerate:** Press the throttle level.

**Decelerate:** Release the throttle level. The spring of the level will return to the position prior pressing and the engine will return to an idle. Before starting the engine, check the Throttle level to make sure it is operating Smoothly. Make sure it return to idle position As soon as the level is released.

## WARNING

### POTENTIAL HAZARD

Malfunction of throttle.

### WHAT CAN HAPPEN

The throttle level could be hard to operate, cause it difficult to speed up or slow down when you need to. This could cause an accident.

### HOW TO AVOID THE HAZARD

Always check the operation of the throttle level before you start the engine. If it does work smoothly, check for the reason. Correct the problem before riding this ATV. Consult your dealer if you cannot find or Solve the problem by yourself.



## **Speed limiter**

There is a screw on throttle box, which is designed to keep the throttle from fully opening, even the throttle lever is pushed to the maximum. Screwing in the adjuster limits the maximum engine power available and decreases the maximum speed of the vehicle. Your ATV was delivered with an adjustable speed limiter. We recommend that all beginners start off with the speed limiter screw turned in to limit the speed while they learn. Once the beginner becomes more familiar with operating the ATV, the screw may be gradually turned out to increase maximum speed. Adults should decide when to adjust the ATV for more power as the riding skills of their youngster improve. Once the rider can operate with full skill at top speed permitted by adjusting the speed limiter alone, the air

intake restrictor plate can be removed. See page 46 about the instruction of removing the air intake restrictor. Adjusting for maximum throttle lever movement without removing the air intake restrictor plate will cause the engine to run roughly at higher speeds.





## **WARNING**

### **POTENTIAL HAZARD**

Adjust the speed limiter and throttle improper.

### **WHAT CAN HAPPEN**

The throttle cable could be damaged and cause improper throttle operation. You could lost control, have accident or be injured.

### **HOW TO AVOID THE HAZARD**

Do not turn the speed adjuster out more than 20 mm (0.8 in).

## **Front Brake Lever**

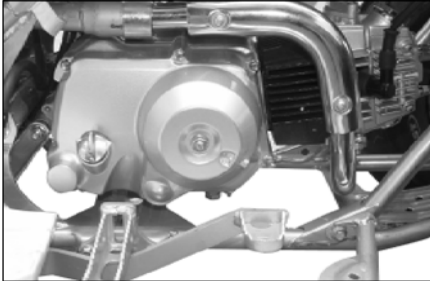
The front brake lever is located on the right handlebar. Pull the lever toward handlebar to apply the front brake. Check the free play of front brake lever. The normal free play is between 10 to 20 mm. (0.4 to 0.8 in.) You can adjust the brake lever by turning the adjuster.





### **Rear brake lever and pedal**

The rear brake lever is located on the left handlebar and the brake pedal is located on right side of the engine. Pull the lever toward the handlebar or push down on the pedal to apply the rear brake.



### **Parking brake**

Apply the rear brake lever then push down the lock plate to apply the parking brake. To release the parking brake lock, squeeze the brake lever then the parking brake will release automatically.





## **WARNING**

### **POTENTIAL HAZARD**

Operate the parking brake improperly.

### **WHAT CAN HAPPEN**

The ATV could start moving unexpectedly if the parking brake is not applied before starting the engine. This could cause loss of control or a collision.

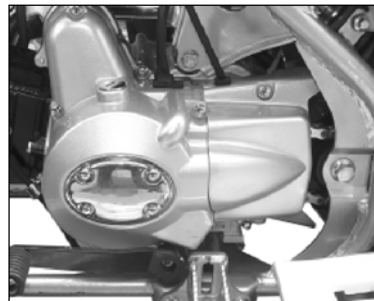
If you ride the ATV without releasing the parking brake, it could cause the brake over-heat to lose braking performance and cause an accident.

### **HOW TO AVOID THE HAZARD**

- Always set the parking brake before starting the engine.
- Always make sure to release the parking brake before you start to ride.
- Do not change the gear to Reverse before the ATV stops completely.

## **Gear shift pedal**

This ATV is equipped with a semi-automatic 4-speed transmission. The gear shift pedal is located on the left side of engine. Push down the gear shift pedal to change the gears as 3 → 2 → 1 → N → R. Move the pedal upward to change the gears as R → N → 1 → 2 → 3. Shut off the throttle completely when performing gear shift or it will damage the engine.





### **Fuel cock**

The fuel cock is below the fuel tank. To switch the fuel cock at three positions:

ON: Fuel flows to carburetor while the lever is in this position.

OFF: Fuel will not flow while the lever is in this position.

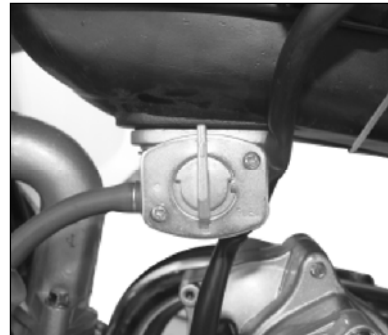
RES: Turn the lever to this position if you run out of fuel while riding. The fill the fuel tank as soon as possible. Turn the lever to the “ON” position after refueling.

### **NOTE:**

**Always turn the lever in “OFF” position when the engine is not running.**

### **Fuel tank cap**

To remove the fuel tank cap, turn the cap counterclockwise.





### **Seat**

Removing the seat by pulling the seat lock lever upward and pull up the seat at the rear. Insert the projection on the front of the seat into the holder and push down on the seat at rear to install the seat.

#### **NOTE:**

Always make sure the seat is securely fitted.

### **Choke lever**

To start a cold engine, use the choke lever. See page 33 about the proper operation to start a cold engine.





## PRE-OPERATION INSPECTION

Always check the following points before using this ATV:

INSPECTION ITEM	INSPECTION PROCEDURE
Brakes	<ul style="list-style-type: none"><li>● Check the operation, condition and free play.</li><li>● Adjust if necessary.</li></ul>
Fuel	<ul style="list-style-type: none"><li>● Check the fuel Level.</li><li>● Fill fuel if necessary.</li></ul>
Engine oil	<ul style="list-style-type: none"><li>● Check engine oil level.</li><li>● Fill the engine oil if necessary</li></ul>
Drive Chain	<ul style="list-style-type: none"><li>● Check chain slack and lubricate.</li></ul>
Throttle	<ul style="list-style-type: none"><li>● Check for proper operation of throttle cable.</li></ul>
Battery	<ul style="list-style-type: none"><li>● Check the level of fluid.</li></ul>
Switches	<ul style="list-style-type: none"><li>● Fill distilled water if necessary.</li><li>● Check all switches</li></ul>
Fittings and Fasteners	<ul style="list-style-type: none"><li>● Check all fittings and Fasteners.</li></ul>
Wheels and Tires	<ul style="list-style-type: none"><li>● Check tire pressure, wear and damage.</li></ul>



## **WARNING**

### **POTENTIAL HAZARD**

Failure to check the ATV before operating.  
Failure to maintain the ATV properly.

### **WHAT CAN HAPPEN**

It could cause an accident or equipment damage.

### **HOW TO AVOID THE HAZARD**

Always check your ATV carefully each time before your use it to be sure the ATV is in safe operation condition.

Always follow inspection and maintenance procedure as shown in the owner's manual

## **Brakes**

### **1.Brake operation**

Test the brakes at slow speed after starting to make sure they are working properly. If any of the brakes does not provide proper braking function, inspect the brake for wear. (See page 48)

### **2.Brake pedal and brake levers**

Check the correct free play in the brake pedal and brake levers. Adjust it if the free play is incorrect. (See page 48)



## **WARNING**

### **POTENTIAL HAZARD**

Improperly operating brakes while riding.

### **WHAT CAN HAPPEN**

The braking ability could lose and cause an accident

### **HOW TO AVOID THE HAZARD**

Always check the brakes every time before you start to ride. Do not ride the ATV if you find there is any problem with the brakes. Find your dealer to inspect it if you cannot correct the problem by yourself according to the adjustment procedures provided in this manual.

## **Fuel**

Always fill regular unleaded gasoline to your ATV. Do not use leaded gasoline, it will cause damage to internal engine parts.

If knocking or pinging occurs, use a different brand of gasoline or premium unleaded fuel.

## **WARNING**

Do not overfill the fuel tank. Be careful not to spill fuel, especially on the engine or exhaust pipe. Make sure the fuel tank cap is closed securely.

Do not refuel right after the engine has been running and is still very hot.



## **Engine Oil**

Always fill engine oil according to ambient temperature recommended as follows:

Ambient temperature / Recommended oil:

5°C ~45°C (40°F~120°F) / SAE20W40

-10°C ~35°C (10°F~100°F) / SAE10W30

-20°C ~0°C (0°F~30°F) / SAE 5W30

Make sure the engine oil is at specified level.

Add oil as necessary. (See page 44)

## **Drive chain**

1. Regularly lubricate the drive chain with an approved chain lube.
2. The chain should have 6-12mm deflection. If the chain needs adjustment, use the procedure on page 45.

## **Throttle lever**

Check the throttle lever and see it operates

correctly. It must open smoothly and return back to idle position when released.

## **Battery**

Check fluid level and fill as necessary. Always use only distilled water to refill it. (See page 50)

## **Switches**

Check the operation of engine stop switch, starter switch, main switch and fuel cock. Repair as necessary for proper operation.

## **Fittings and Fasteners**

Always check the tightness of chassis before riding this ATV. Take the ATV to your dealer or refer to this manual for Correct tightening torque.



## Tires

The tire gauge is equipped with this ATV and located in the tool bag under the seat. Measure tire pressure by the tire gauge and set the front and rear tires pressure to 20kPa (2.9psi)

2. Always use size 19 × 7-8 as front tires.
3. Always use size 18 × 8-8 as rear tires.
4. When the tire groove decreases to 3 mm (0.12 in) due to wear, replace the tire.

### **WARNING**

#### **POTENTIAL HAZARD**

Operating this ATV with Improper tires, or with improper or uneven tire pressure.

#### **WHAT CAN HAPPEN**

Operating this ATV with Improper tires, or with improper or uneven tire pressure could cause loss of control and an accident.

#### **HOW TO AVOID THE HAZZARD**

1. Always set the front and rear tires pressure to be 20kPa (2.9psi).



## OPERATION

### **WARNING**

Indicates a potential hazard that could result in serious injury or death

### **WARNING**

#### **POTENTIAL HAZARD**

Operating ATV without being familiar with all controls.

#### **WHAT CAN HAPPEN**

Loss of control, which could cause an accident or injury.

#### **HOW TO AVOID THE HAZARD**

Read this manual carefully. If you don't understand any control or function, ask your dealer.

### **Starting a cold engine**

1. Set the parking brake.
2. Turn the fuel cock to "ON"
3. Turn the engine stop switch to "RUN"
4. Turn the main switch to "ON"
5. Shift the transmission gear to neutral.
6. Push down the choke lever to the end.
7. Complete close the throttle lever.
8. Push the start switch to crank the engine
9. Pull up the chock lever to the middle position (warming up position.)until the engine runs then release the start button. If the engine fails to start, release the start button, then push it again. Each cranking should not be more than 10 seconds.
10. Keep warming up the engine for 5 min. then pull up the choke lever to top.



### **To start out and accelerate:**

1. Apply the rear brakes.
2. Release the throttle lever.
3. Shift into first gear then release the shift pedal.
4. Release the rear brake.
5. Open the throttle gradually.
6. Once the engine has reached adequate speed, release the throttle lever.
7. Shift into second gear then release the Shift pedal.
8. Open the throttle gradually.
9. Follow the same procedure when shifting  
To the third and fourth gears.

#### **WARNING**

Always release the shift pedal before opening the throttle, or the engine could wheelie and will cause an accident.

### **To decelerate:**

1. Release the throttle.
2. Apply the brakes smoothly and evenly.
3. Shift to lower gear once the engine has sufficiently slowed.

#### **WARNING**

##### **POTENTIAL HAZARD**

Apply a lower gear when the engine speed is too high.

##### **WHAT CAN HAPPEN**

The wheel could stop rotating. This could cause an accident, loss of control, injury and damage the engine.

##### **HOW TO AVOID THE HAZARD**

Always shift to lower gear before you make sure that the engine has sufficiently slowed.



### Engine break-in

The most important period in the life of your engine is between 0 and 20 hours. Please read the following information very carefully.

- Do not put an excessive load on the ATV for first several hours of running.
- Never continuous operation above half throttle.
- Cool off the engine for ten minutes after every hour of operation.
- Vary the speed of the engine from time to time.

### Parking

When parking, stop the engine and shift into neutral. Turn the fuel cock to “OFF” position and apply the parking brake. Never parking on hills or other inclines.

### Loading

This ATV is not designed to carry any cargo or tow a trailer. Never exceed the maximum loading capacity as 100 kg (220 lb) which including the total weight of rider and accessories. Always choose the accessories that is equivalent in design and quality.

#### **WARNING**

Overloading this ATV or carrying or towing cargo could cause changes in vehicle handling which could lead to an accident. Never exceed the stated loading capacity for this ATV.



## RIDING YOUR ATV

### WARNING

Indicates a potential hazard that could result in serious injury or death.

#### **Know you ATV before riding**

This ATV is for recreation use. This section, riding your ATV, provides general ATV riding instructions for recreational riding. The skills and techniques described in this section are appropriate for all types of riding. Riding this ATV requires special skills. Take the time to learn the basic techniques well before attempting more difficult maneuvers.

For your safety, be sure you have read this Owner's Manual completely and understand

the operation of the controls before you begin to ride. Read all caution and warning labels on your ATV and pay particular attention to the safety information on pages 6 ~10.

#### **RIDE WITH CARE AND JUDGMENT**

##### **Get training if you are inexperienced.**

Beginners should get training from a certified instructor. Start at slow speeds first to be familiar with this ATV even if you are an experienced rider. Do not operate at maximum performance until you are totally familiar with the ATV's handling and performance characteristics. Take the time to learn the basic techniques well before attempting more difficult maneuvers



**Never allow children under 16 years old to ride this ATV.**

A child under 16 should never operate an ATV with engine size greater than 90c.c.

**This ATV is designed to carry the operator only, Never carry a passenger.**

The long seat is to allow the operator to shift position as needed during operation. It is not a design for carrying passenger.

**Apparel**

Always wear an approved motorcycle helmet that fits properly. You should also wear eye protection (face shield or goggles), gloves, boots, long-sleeve jacket and long pants.

**Do not operate after consuming alcohol or drugs.**

Operator's performance capability is reduced by the influence of alcohol or drugs.

**Pre-operation checks**

Always perform the pre-operation checks listed on the page 27 before riding for safety and proper care of your ATV.

**During operation**

Always keep your feet on the footboards during operation. Otherwise your feet may contact the wheel and could cause injury. Avoid wheelies and jumping. You may lose control of the ATV or overturn.



### **Exhaust system**

The exhaust system on the ATV is very hot during and following operation. Never touch the exhaust system. Park the ATV in a place where pedestrians or children are not likely to touch it.

### **Be careful where you ride**

- This ATV is designed for off-road use only. Riding on paved surfaces can cause loss of control. Do not ride on any public road, street, or highway. Riding on public roads can result in collisions with other vehicles.
- Know the terrain where you ride. Ride cautiously in unfamiliar areas. Stay alert for roots, holes or rocks in the terrain, and other hidden hazards which may cause the ATV to upset.

- When riding in an area where you might not easily be seen, mount a caution flag on the ATV.
- Do not ride on private property without getting permission. Do not ride in areas posted “ No Trespassing”.
- Select a large, flat area off-road to become familiar with your ATV. Make sure that this area is free of obstacles and other riders. You should practice control of the brake, throttle, gear shifting and turning techniques in the area before trying more difficult terrain.
- Set the parking brake and follow the instruction on page 32 to start the engine. Once it has warmed up you are ready to begin riding your ATV. As you get on the ATV, be sure not to accidentally move the shift pedal. Don't touch the engine and exhaust pipe.



### **Turning you ATV**

To achieve maximum traction while riding off-Road, the two rear wheels are mounted solidly on one axle and turn together at the same speed. Therefore, unless the wheel on the inside of the turn is allowed to slip or lose some traction, the ATV will resist turning. A special turning technique must be used to allow the ATV to make turns quickly and easily. It is essential that this skill be learned first at low speed.

### **Climbing uphill**

Use proper riding skill to avoid vehicle overturns on hills. Be sure that you can maneuver your ATV well on flat ground before attempting any incline and then practice riding first on gentle slopes. Try more difficult climbs only after you have learned more skills. In all

cases avoid inclines with slippery or loose surfaces, or obstacles that might cause you to lose control. It is important when you climbing a hill to make sure that your weight is transferred forward on the ATV. This can be accomplished by leaning forward and, on steeper inclines, standing on the footboards and leaning forward over the handlebars.

If you are climbing a hill and you find that you have not properly judged your ability to make it to the top, you should turn the ATV around while you still have forward motion (provided you have the room to do so) and descend the hill.

If your ATV has stalled or stopped and you believe you can continue up the hill, restart carefully to make sure you do not lift the front wheels which could cause you to lose control. If you are unable to continue up the



hill, dismount the ATV on the uphill side. Physically turn the ATV around and then go down hill.

If you start to roll backwards, DO NOT use the rear brake to stop or try to put the ATV in gear. The ATV could easily tip over backwards. Instead, dismount the ATV immediately on the uphill side.

### **Riding downhill**

When riding your ATV downhill, shift your weight as far to the rear and uphill side of the ATV as possible. Move back on the seat and sit with your arms straight. Choose a low gear which will allow the engine compression to do most of the braking for you. Wrong braking may lead to a loss of traction. Use caution while descending a hill with loose or slippery surfaces. Braking ability and traction may be

adversely affected by these surfaces. Wrong braking may also cause a loss of traction. If possible, ride your ATV straight downhill. Avoid sharp angles which could cause the ATV to tip or roll over. Carefully choose your path and ride no faster than you will be able to react to obstacles which may appear.

### **Crossing a slope**

Crossing a sloping surface on your ATV requires you to properly position your weight to keep proper balance. Make sure that you have learned the basic riding skills on flat ground before attempting to traverse a sloping surface. Avoid slopes with slippery surfaces or rough terrain that may disturb your balance.

As you travel across a slope, lean your body in the uphill direction. It may be necessary to



correct the steering when riding on loose surfaces by pointing the front wheels slightly uphill. When riding on slopes be sure not to make sharp turns either up or down hill.

If your ATV does begin to tip over, gradually steer in the downhill direction if there are no obstacles in your path. As you regain proper balance, gradually steer again in the direction you wish to travel.

### **Crossing through shallow water**

The ATV can be used to cross slow moving, shallow water of up to a maximum of 20cm (7.9 inches) in depth. Before entering the water, choose your path cautiously. Enter where there is no sharp drop off, and avoid rocks or other obstacles which may be slippery or upset the ATV. Ride slowly and Carefully.

Test your brakes after leaving the water. Do not continue to ride your ATV without verifying that you have regained proper braking ability.

### **Riding over rough terrain**

Riding over rough terrain should be done with caution. Look out for obstacles which could cause damage to the ATV or could lead to an upset or accident. Be sure to keep your feet firmly fixed on the footboards at all times. Avoid jumping the ATV as loss of control and damage to the ATV may result

### **Sliding and skidding**

Care should be used when riding on loose or slippery surfaces since the ATV may slide. If unexpected and uncorrected, sliding could cause an accident.



To reduce the possibility for the front wheels to slide in loose or slippery conditions, putting your weight over the front wheels will sometimes help.

If the rear wheels of your ATV start to slide sideways, control can usually be regained (if there is place to do so) by steering in the direction of the slide. Applying the brakes or accelerating is not recommended until you have corrected the slide.

With practice, over a period of time, skill at controlled sliding can be improved. The terrain should be chosen carefully before attempting such maneuvers, since both stability and control are reduced. Bear in mind that sliding maneuvers should always be avoided on extremely slippery surfaces such as ice, since all control may be lost.

#### **What to do if ...**

This section is designed to be a reference guide only. Make sure to read each section on riding techniques completely.

#### **What to do ... ?**

- If your ATV doesn't turn when you want it to: Bring the ATV to a stop and practice the turning maneuvers again. Be sure you are positioning your weight on the footboard to the outside of the turn. Put your weight over the front wheels for better control. (See page 39.)
- If your ATV begins to tip while turning: Lean more into the turn to regain balance. If necessary, gradually release the throttle and/or steer to the outside of the turn. (See page 39.)
- If your ATV can't make it up a hill you are trying to climb: Turn the ATV around if you still have forward. If not, stop, dismount on



the uphill side of the ATV and physically turn the ATV around. If the ATV starts to slip backwards **DO NOT USE THE REAR BRAKE**-the ATV may tip over on top of you. Dismount the ATV on the uphill side. (See pages 39 ~ 40)

- If your ATV is crossing a sloping surface: Be sure to ride with your weight positioned towards the uphill side of the ATV to keep proper balance. If the ATV starts to tip, steer down the hill (if there are no obstacles in your way) to get balance again. If you discover that the ATV is going to tip over, dismount on the uphill side. (See 40~ 41)

- If your ATV meets shallow water: Ride slowly and carefully through slow moving water, watching for obstacles. Be sure to let water drain from the ATV and **CHECK YOUR BRAKES FOR PROPER OPERATION** when you come out of the water. Do not continue

to ride your ATV until you have regained adequate braking ability. (See page 41)

- If your ATV starts to slide sideways: Steer in the direction of the slide if you have the place. Applying the brakes or accelerating is not recommended until you have corrected the slide. (See pages 41 ~ 42)



## **PERIODIC MAINTENANCE AND ADJUSTMENT**

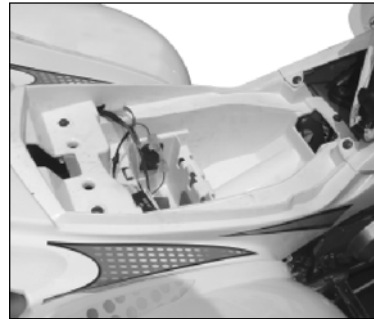
Periodic check , adjustment and lubrication will keep your machine in the securest and most efficient condition possible. Security is an obligation of the machine owner. The most important points of machine inspection, adjustment and lubrication are explained on the following pages.

### **Owner's manual and tool kit**

Your are advised to put this owner's manual and low-pressure tire gauge in the vinyl bag and always carry them along with the owner's tool kit under the seat.

The service information included in this manual is designed to provide you, the owner, with the essential information for completing your own preventive maintenance and minor

repairs. The tools provided in the Owner's tool kit are enough for this purpose, except that a torque wrench is also necessary to correctly tighten nuts and bolts.





## **Engine oil**

### **Engine oil level measurement**

1. Place the ATV on a level surface.
2. Warm up the engine for several minutes and stop it.
3. Remove the dipstick and wipe it off with a clean rag. Insert the dipstick in the filler hole without screwing it in.
4. Remove the dipstick and check the oil level.
5. The oil level should be between the maximum and minimum marks. If the level is low, add oil to raise it to the proper level.

### **Engine oil replacement**

1. Place the ATV on a level position.
2. Warm up the engine for several minutes and stop it.

3. Place a container under the engine.
4. Remove the dipstick and drain bolt to drain the oil.
5. Check the O-ring and replace if damaged.
6. Install the drain bolt and tighten to specification.
7. Fill the engine with oil and equip the dipstick.
8. Warm up the engine for several minutes at idle speed. Inspect oil leakage while warming up.

## **Drive chain**

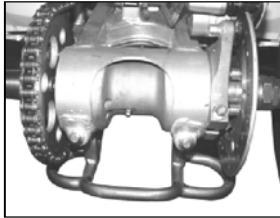
### **Drive chain inspection**

1. Place the ATV on a level surface.
2. Check the amount of chain slack by moving the vehicle slightly forward to gain slack at the top side of the chain.
3. The chain should have 6-12mm deflection.

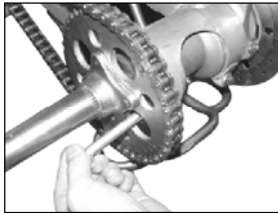


### **Drive chain slack adjustment**

1. Place the ATV on a level position.
2. Loosen the two rear housing housing mount bolts and braking bracket mount bolt.



3. Insert adjust bolt in rear housing.



4. Turn the rear tires by moving the vehicle slightly forward to gain 6-12mm deflection.
5. Tighten the rear housing mount bolts and braking bracket mount bolt.

### **Spark plug inspection**

The spark plug is an important engine component and is easy to check. The condition of the spark plug can indicate the condition of the engine.

For example, a very white center electrode porcelain color could indicate an intake air leak or carburetion problem for that cylinder. Do not attempt to diagnose such problems yourself.

Instead, take the ATV to your dealer. You should regularly remove and inspect the spark plug because heat and deposits will cause the spark plug to slowly break down and erode. If electrode erosion becomes excessive, you should replace the spark plug with one of the proper type.

Before installing the spark plug, measure the electrode gap with a feeler gauge and adjust to specification.

When equipping the spark plug, always clean



the gasket surface and use a new gasket. Wipe off any grime from the threads and tighten to the specified torque.

### **Air filter cleaning**

1. Remove the front cover by removing the screws.
2. Remove the air filter case cover by unhooking the fasteners.
3. Remove the air filter element by unhooking the fastener.
4. Wash the air filter element gently but totally in solvent.
5. Press the excess solvent out of the air filter element and let it dry.
6. Check the air filter element. If damaged, replace it.
6. Apply foam air filter oil or other quality foam air filter oil to the air filter element. If foam air

filter oil is not useful, SAE 10W30 motor oil may be used.

7. Equip the air filter element, the air filter case cover and the front cover.

### **Air intake restrictor plate removal**

To get full engine performance ability, removing the air intake restrictor plate is required.

1. Remove the air filter element. (See Air filter cleaning for removal and installation procedures.)
2. Remove the air intake restrictor plate.
3. Equip the air filter element.

### **Carburetor adjustment**

The carburetor is a principal part of the engine and requires very complex adjustment. Most adjusting should be left to your dealer who is professional and experienced on this.



However, the idling speed may be performed by the owner as a part of the usual maintenance routine.

### **Idle speed adjustment**

1. Start the engine and warm it up for a few minutes at nearly 1,000 to 2,000 r/min. Sometimes rev the engine to 4,000 to 5,000 r/min. The engine is warm when it quickly responds to the throttle.
2. Connect the tachometer and set the idle to the specified idling speed by adjusting the throttle stop screw. Turn the screw in to increase engine speed, and out to decrease engine speed.

### **Valve clearance adjustment**

The proper valve clearance changes with use, leading to incorrect fuel/air supply or engine

noise. To prevent this, the valve clearance must be adjusted periodically. This adjustment however, should be left to a professional service technician.

### **Cam chain adjustment**

The cam chain will loosen with use, resulting in improper valve timing and engine noise. To prevent this, the cam chain tensioner must be adjusted regularly. This adjustment should be left to your dealer.



### **Front brake shoe inspection**

A wear indicator is provided on each brake. The indicators allow inspecting of brake shoe wear without disassembling the brake. Apply the brake and check the position of the indicator. If the indicator reaches the wear limit line, ask your dealer to replace the shoes as a set.

### **Front brake lever free play adjustment**

The front brake lever free play should be adjusted to 10~12 mm (0.4~0.5 in) at the brake lever pivot. If the free play is improper, adjust as follows:

1. Release the upper locknut and fully turn in the adjusting bolt.
2. Release the lower locknut.
3. Turn the lower adjusting bolt specified free free play is obtained.

4. Tighten the lower locknut.
5. While applying the front brake, turn out the upper adjusting bolt until the upper and lower cable lengths are equal. The cable joint will become vertical.
6. Tighten the upper locknut.

### **Rear brake lever and pedal adjustment**

1. Brake lever free play adjustment
  - a. Release the brake cable locknut.
  - b. Turn the adjusting bolt at the brake lever until brake lever free play is 5~8 Mm (0.20~0.30 in).
  - c. Tighten the locknut.
2. Brake pedal free play adjustment
  - a. Turn the brake rod adjusting nut at the right of the engine until brake pedal free play is 20~30 mm (0.8~1.2 in).



### **Clutch adjustment**

1. Remove the rubber cap.
2. Release the locknut.
3. Slowly turn the adjusting bolt clockwise until resistance is felt. Then turn it 1/8 counterclockwise.
4. Tighten the locknut to the specified torque.
5. Equip the rubber cap safely.

### **Cable inspection and lubrication**

Lubricate the inner cables and the cable ends. If the cables do not operate evenly, ask your dealer to replace them.

### **Wheel removal**

1. Raise the wheel by placing a suitable stand under the frame.
2. Remove the bolts from the wheel.
3. Remove the wheel assembly

### **Wheel installation**

When installing the wheel, reverse the removal procedure.

Tighten the wheel bolts to the specified torques.



## **Battery**

Inspect the level of the battery fluid and see if the terminals are tight. Add distilled water if the fluid level is low.

### **Replenishing the battery fluid**

A poorly maintained battery will corrode and discharge quickly. The battery fluid should be checked at least once a month.

1. The level should be between the upper and lower level marks. Use only distilled water if refilling is necessary.
2. Disconnect the negative (-) lead.
3. Disconnect the positive (+) lead and remove the battery.
4. When the machine is not to be used for a month or longer, remove the battery and put it in a cool, dark place. Thoroughly recharge the battery before reusing.

5. If the battery is to be stored for a longer period than the above, check the specific gravity at least once a month and recharge the battery when it is too low.

6. Always make sure the connections are right when putting the battery back in the machine. Make sure the breather hose is properly connected and is not damaged or obstructed.

### **Fuse replacement**

1. The fuse case is placed under the seat.
2. If the fuse is blown, turn off the main switch and equip a new fuse of the specified amperage. Then turn on the switches. If the fuse immediately blows again, consult your dealer.



## **CLEANING AND STORAGE**

### **Cleaning**

Frequent, thorough cleaning of your machine will not only enhance its appearance but will improve its general performance and extend the useful life of many components.

1. Before cleaning the machine.

a. Block off the end of the exhaust pipe to prevent water entry. A plastic bag and strong rubber band may be used.

b. Assure the spark plug and all filler caps are correctly installed.

2. If the engine case is extremely greasy, apply degreaser with a paintbrush. Do not apply degreaser to the wheel axles.

3. Rinse the dirt and degreaser off with a garden hose. Use only sufficient pressure to do the job.

4. Once the majority of the dirt has been hosed off, wash all surfaces with warm water and mild, detergent-type soap. An old toothbrush or bottle brush is handy for hard-to-get-at places.

5. Rinse the machine off immediately with clean water and dry all surfaces with a chamois, clean towel or cloth.

6. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.

7. Automotive type wax may be applied to all painted and chrome plated surfaces. Avoid combination cleaner-waxes. Many contain abrasives which may mar the paint or protective finish. When finished, start the engine and let it idle for several minutes.



## **Storage**

Long term storage (60 days or more) of your machine will require some protective procedures to guard against deterioration. After completely cleaning the machine, prepare for storage as follows:

1. Fill the fuel tank with fresh fuel
2. Remove the spark plug, pour about one tablespoon of SAE 10W30 or 20W40 motor oil in the spark plug hole and reinstall the spark plug. Ground the spark plug wire and turn the engine over several times to coat the cylinder wall with oil.
3. Lubricate all control cables.
4. Block up the frame to raise all wheels off the ground.
5. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.
6. If storing in a damp or salty atmosphere,

coat all exposed metal surfaces with a light film of oil. Do not apply oil to any rubber parts or the seat cover.

7. Remove the battery and charge it. Store it in a dry place and recharge it once a month. Do not store the battery in an extremely warm or cold place (less than 0°C (30°F) or more than 30°C (90°F)).



SPECIFICATION	
Model	ATV110-M
<b>Dimension:</b>	
Overall length	1484 mm
Overall width	865 mm
Overall height	953 mm
Seat height	660 mm
Wheel base	1024 mm
Min. ground clearance	108 mm
Minimum turning radius	1650 mm
<b>Dry weight:</b>	124 kg (273 lbs)
<b>Engine:</b>	
Type	Air cooled, 4-stroke, 3 speeds/reverse
Cylinder arrangement	Single cylinder
Displacement	107 cm <sup>3</sup>
Bore × Stroke	52.4 × 49.5 mm
Compression ratio	9.1 : 1
Starting system	Electric starter



<b>Lugrication systems:</b>	<b>Wet sump</b>
<b>SPECIFICATION</b>	
<b>Model</b>	<b>ATV110-M</b>
Rider Capacity	1 person
Engine Oil Capacity	0.95L
Fuel Capacity	7.8 L
Starting	Electric
Transmission	Semi-automatic
Front Suspension	Dual A-arm
Rear Suspension	Swing arm
Front/Rear Brakes	Drum
Parking Brake	Mechanical Lock
Front Tires/PSI	19 × 7 - 8 / 2.9psi
Rear Tires/PSI	18 × 8 - 8 / 2.9psi
Neutral Indicator	Standard(green)
Max. Load Capacity	90 kg (198 lb)
Battery(Green)	12V-9Ah



# || **ATV110-M** ||

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